



EEOptics Corporation

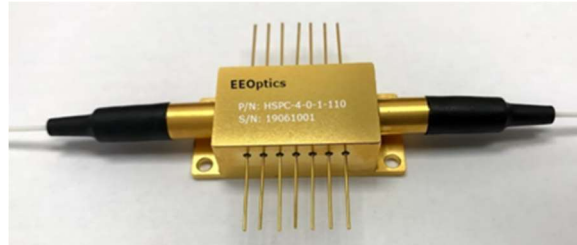
High Speed Polarization Controller/Scrambler

Features

- Fast Response Speed ($< 10\mu\text{s}$)
- Linear Response
- Long lifetime
- Low loss
- Flexible configuration
- Compact in size
- Wide response bandwidth

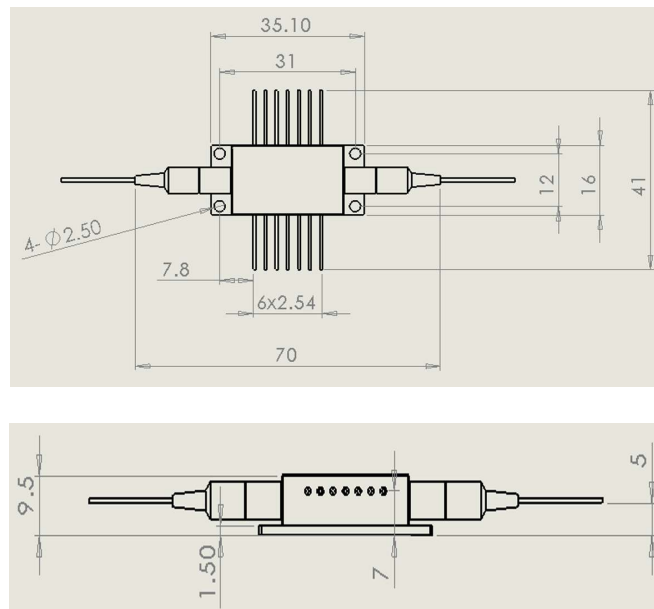
Applications

- Polarization Scrambler
- Polarization Measurement
- Quantum Computing /Communication
- Fiber Lasers
- Fiber Optic Sensors
- OCT systems



EEOptics Corporation provides High Speed, Electro-optic Fiber Optic Polarization Controllers/scramblers that not only convert any input polarization state to any desired output polarization state, but also work as the polarization scramblers. EEOptics' high speed polarization controllers are developed based on its innovative EEO crystals technology. They are fast with less than $10\mu\text{s}$ response speed, linear response to the control signal, long lifetime without limitation on the cycles, solid state without moving parts, completely vibration free, and compact in size.

Dimensions





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Specifications			
Parameters		Values	
Optical Performances			
Operating Wavelength ¹	1550nm		
	4 stages	3 stages	2 stages
Insertion Loss (IL)	<1.2dB	<1.1dB	<1.0dB
Polarization Dependence Loss (PDL)	<0.12dB	<0.08dB	<0.06dB
Activation Loss (0V~ V _{2π})	<0.12dB	<0.08dB	<0.05dB
Return Loss	>50dB		
Optical Power Handling ²	500mW		
Electrical Performances			
Response Time (Rise/Fall Time)	<10μs		
V _π (@room temperature)	V _π <70V (@ 1550nm)		
Modulation Rate ³	DC~ 130kHz		
Physical/Environmental Performances			
Operating Temperature	0 ~ 65° C		
Storage Temperature	-40 ~ 80°C		
Dimension	70mm x 41mm x 9.5mm		
Notes:			
1. Other wavelengths are available			
2. High power version is available			
3. Limited by the driver design			

Ordering Information

HSPC-



	# of stages	Wavelength	Package	Fiber type		Connector	
				Input	Output	Input	Output
4 - 4 stages	0 - 1550	0 - butterfly(w/o TEC)	1 - SM fiber	0 - Bare fiber	0 - None		
3 - 3 stages	1 - 1310	0T - butterfly(w/TEC)	2 - PM Panda fiber	1 -0.9mm loose tube	1 - FC/APC		
2 - 2 stages	2 - 1064	S - Special	S - Special	S - Special	2 - FC/PC		
S - Special	S - Special				S - Special		

For example:

P/N: HSPC-4-0-0T-11-1-00

Description: High Speed Polarization Controller, 4-stage, 1550nm, butterfly package, integrated with TEC, single mode fiber in/out, 0.9mm loose tube, without connectors on both ends